

CORRES CONTROL
OUTGOING LTR NO
DOE ORDER # 47001

01-RF-02374

DIST	LTR	ENC
BACA T		
BRAILS FORD M D		
CARD R G		
FERRI M S		
FULTON J C		
MARTINEZ, L A		
POWERS K		
SCOTT G K		
SHELTON D C		
SPEARS M S		
TRICE K D		
TUOR N R	X	X

BEAN, C		
BUTLER J L		
CARLSON R		
CHRITTON M		
CLARK, D		
DANIELS K W	X	X
DIETERLE S	X	X
DORR K		
FARRELL R E		
FERRERA, D	X	
CAMERON A	X	X
GIBBS F	X	
HUMISTON T	X	X
ITO F M		
JENKINS K		
KONWINSKI G		
MCEAHERN P M	X	X
NOTES, J L		
MYERS K		
NESTA, S		
NORTH K		
SHULER, K W		
SWENSON B A	X	X
WIEMELT K		
HOHL, A	X	X
TURNER K	X	X
MCGRORY M	X	X
SMITH B	X	X
HARMS K	X	X

CORRES CONTROL	X	X
ADMIN RECD/080	X	X
TRAFFIC		
PAUSE/130		

CLASSIFICATION		
UCNI		
UNCLASSIFIED	X	X
CONFIDENTIAL		
SECRET		

AUTHORIZED CLASSIFIED
SIGNATURE *CJ Fawcett*

Date *12/17/01*
IN REPLY TO RFP CC NO

ACTION ITEM STATUS
☐ PARTIAL/OPEN
☐ CLOSED
LTR APPROVALS

ORIG & TYPIST INITIALS
ARH wjd



DEC 17 2001

01-RF-02374

Ron Bostic
Director, Nuclear Regulatory Division
DOE, RFFO

TRANSMITTAL OF THE PROCESS WASTE TRANSFER SYSTEM ANNUAL UPDATE
FOR INFORMATION - MRC-004-01

Refs

- Site Safety Analysis Report (Site SAR), Volume II, Facility Safety Analyses, Revision 2, Kaiser-Hill LLC, June 1999*
- Hazard Baseline Documentation, DOE-EM-STD-5502-94, U S Department of Energy, Washington, D C , August 1994*
- Tuor Letter to Hartmann (NRT-036-01) Submittal of the Preliminary Hazard Categorization for the Aqueous Waste Treatment System, August 23, 2001*
- Sargent Letter to Tuor (SP NR DEF 01-01714) Approval of the Preliminary Hazard Categorization of "Radiological" for the Aqueous Waste Treatment System, September 17, 2001*
- Hazard Categorization and Accident Analysis Techniques for Compliance With DOE Order 5480 23, Nuclear Safety Analysis Reports, DOE-STD-1027-92, U S Department of Energy, Washington, D C , December 1992*

This letter transmits the enclosed Process Waste Transfer System (PWTS) Facility Safety Analysis (FSA), Revision 3 for information This revision of the PWTS FSA provides technical information pertinent to the PWTS as it relates to the current Kaiser-Hill LLC (K-H) Site Water Treatment Strategy and the Aqueous Waste Treatment System (AWTS) Project discussed in greater detail below

This PWTS FSA, Revision 3 satisfies the requirements for an annual update of a Site Authorization Basis (AB) document and replaces the previous PWTS FSA, Revision 2, in its entirety as part of the *Site SAR, Volume II, Facility Safety Analyses* (Reference [a]) The Safety Analysis maintains the facility's hazard categorization as *radiological* and meets the requirements for an auditable safety analysis as referenced in DOE Environmental Management limited standard, DOE-EM-STD-5502-94, *Hazard Baseline Documentation* (Reference [b])

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Background

The previous mission of the PWTS involved transporting process liquid low level/low-level mixed (LL/LLM) waste from waste-generating facilities to Building 374 for treatment. To support Site closure and timely decommissioning of Buildings 371/374, the PWTS' mission changed to that of providing such liquid waste transport to the 231 "B" Tank for interim storage until the AWTS Subcontractor picks up the water for treatment and disposal offsite. The current K-H Site Wastewater Treatment Strategy involves excluding the Building 374 Liquid Waste Treatment Facility (LWTF) from receiving Site LL/LLM wastewater in January 2002. Thereafter, that liquid LL/LLM waste is planned to be transported via the PWTS to the 231 "B" Tank for interim storage until the AWTS Subcontractor transports the water offsite for treatment and disposal. The 231 "A" Tank is currently being emptied and cleaned and is not part of the AWTS Project at this time.

Building 374 treatment processes will continue to operate and treat the Building 374 inventory until it is eliminated. It is anticipated that the Building 374 process equipment will be operational for several months after the influent liquid LL/LLM waste is shut off. Once the Building 374 inventory is eliminated the process equipment will be taken out of service and decontamination and decommissioning (D&D) activities will commence.

Synopsis of PWTS FSA Revision 3 Changes

The PWTS maintains its final hazard classification as *radiological* in Revision 3 based on current radiological material inventories and the hazards associated with the facility and its current mission.

Major changes found in this FSA Revision 3 are as follows:

- 1 Technical changes to the PWTS system descriptions, configuration, and mission operations driven by the system's new interface with the Site and involvement with the AWTS,
- 2 The PWTS FSA, Revision 2, Table 4 "Hazardous Material Inventory Controls for Process Waste" and the document's general controls were deleted and replaced with new Section 3, "Safety Management Programs" (SMPs) and Section 5, "Scope of Approved Activities and Operational Controls". These sections are discussed below,
- 3 The Material At Risk (MAR) for the 231 "A" and "B" Tank segment has been changed from the previous MAR limit of 0.91 grams Pu to < 8.4 grams Pu equivalent. The PWTS valve vaults/ piping and tanker truck segments also have limits established at < 8.4 grams Pu equivalent. Such segmentation is allowable under Attachment 1 to Reference [e]). Radioactive material controls prevent bringing such materials together or causing harmful interaction from a common severe phenomena,

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- 4 The facility's safety envelope and *radiological* facility hazard categorization is protected via adherence to Section 3's SMPs and the controls established in Section 5's "Scope of Approved Activities and Operational Controls" Such controls largely revolve around adherence to the 231 Tanks' Waste Acceptance Criteria (WAC) (via field measurements, sampling and analysis, mass balance, etc) to effect compliance with each PWTS' segment MAR limit of < 8 4 grams Pu equivalent,
- 5 Section 2 2 6 "Facility Inventory and Source Term Development" was updated to reflect the new 231 Tanks' WAC MAR derived for the AWTS Project (References [c] and [d]) Section 4 4 "Facility Hazard Classification" was also updated to include a MAR estimate (Table 3) MAR assumptions were also added reflecting AWTS Project documentation and strategy.

The 231 "B" Tank, currently a significant element of both the PWTS and the AWTS Project will become a segment of the AWTS FSA upon completion of that AB document The AWTS FSA is currently planned to be submitted to DOE, RFFO for approval as a section of the Site SAR, Volume II (Reference [a]) in December 2001

If you have any questions, please contact Al Hohl at extension 3767 or Tim Humiston at extension 2700

Michael R Chritton,
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Remediation, Industrial D&D, and Site Services Project
Kaiser-Hill Company, LLC

ARH wjd

Enclosure
As Stated

Ong and 1 cc - Ron Bostic

cc
Dave Faulkner



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